| O 1 P E JAN 2 3 2004 | 3/ | U.S. Patent and Tradema | PTO/SB/81 (02-01) ad for use through 10/31/2002. OMB 0651-0035 ark Office; U.S. DEPARTMENT OF COMMERCE ion unless it display a valid OMB control number. |
|----------------------|------------------------|-------------------------|---|
| TRADEMARY | | Application Number | 10/037,146 |
| CIRADEMA | | Filing Date | 12/21/2001 |
| | | First Named Inventor | Painter |
| • | POWER OF ATTORNEY OR | Title | RESONANT OPTICAL MODULATORS |
| | AUTHORIZATION OF AGENT | Group Art Unit | |

Group Art Unit
Examiner Name

Attorney Docket Number

CQC13NP

| I hereby appoint: | | | | | |
|---|--|-----------------------|-------------------------|--|--|
| | Customer Number 36394 | □ | | | |
| OR Practitioner(s) na | amed below: | | | | |
| Name Registration Number | | | | | |
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| as mulaur atternavia) as | | | | | |
| | r agent(s) to prosecute the application id States Patent and Trademark Office con | | to transact all | | |
| _ | espondence address for the above-ident | ified application to: | | | |
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| OR | | Label | here | | |
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| Country Telephone | | Fax | | | |
| I am the: | | -ax ı | | | |
| Applicant/Invento | or. | | | | |
| | | | | | |
| X Assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96). | | | | | |
| SIGNATURE of Applicant or Assignee of Record | | | | | |
| Name Jeffrey | | | | | |
| Signature | | | | | |
| Date 4-7-2003 | | | | | |
| NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representativ (s) are required. Submit multiple forms if more than one signature is required, see below. | | | | | |
| | | | | | |

JAN 2 3 2004 26

PTO/SB/96 (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
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ader the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

| A STATE OF THE PARTY OF THE PAR | | STATEMENT UN | NDER 37 | CFR 3.73(b) |
|--|--|--|--|---|
| Applica | ant/Patent Owner:Xp | onent Photonics, Inc. | | |
| Applica | ation No./Patent No.:_1 | 10/037,146 | | Filed/Issue Date: 12/21/2001 |
| Entitle | d: RESONANT OF | PTICAL MODULAT | TORS | |
| Xpon | ent Photonics, Inc. | , a corpe | oration | |
| | (Name of Assignee) | | | e.g., corporation, partnership, university, government agency, etc.) |
| | | • | | |
| | that it is: | | | |
| | he assignee of the enti | _ | | |
| 2. 📖 5 | an assignee of less that The extent (by, percenta | 1 the entire right, title a age) of its ownership in | and interenters | est. % |
| in the p | atent application/paten | t identified above by vi | irtue of e | ither: |
| V | An assignment from the vas recorded in the Uni | ted States Patent and | nt applic Tradema | eation/patent identified above. The assignment ark Office at Reel, Frame, or for |
| OR | | | | |
| | A chain of title from the ssignee as shown belo | | ent applic | cation/patent identified above, to the current |
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| | | | | Patent and Trademark Office at or for which a copy thereof is attached. |
| | 2. From: | | To: | |
| | The document was | recorded in the United | d States | Patent and Trademark Office at or for which a copy thereof is attached. |
| | 3. From: | | _To: | |
| | The document was | recorded in the United | d States | Patent and Trademark Office at or for which a copy thereof is attached. |
| | [] Additional docume | nts in the chain of title | are liste | d on a supplemental sheet. |
| [NO] must | es of assignments or ot <u>[E:</u> A separate copy (i.e | her documents in the co., the original assignment Division in acco | chain of the nent document doc | title are attached. ument or a true copy of the original document) vith 37 CFR Part 3, if the assignment is to be |
| The unde | ersigned (whose title is | supplied below) is auth | norized to | o act on behalf of the assignee. |
| _ | 4-1-20 Date | 03 | | Jeffrey S. Rittichier |
| | Date | | | typed of printed name |
| | • | | | Signature |
| | | | P | resident and CEO, Xponent Photonics Inc. |
| | | | | Title |

| ASSI | Docket Number | · (Optional) C13NP | | | | |
|---|---|--------------------------------|--|-------------------|-----------------|--|
| Whereas, I/We, | Oskar J. Painter | of | Pasade | ena, CA | ,hereafter | |
| referred to as applicar | nt, have invented certain ne Resonant o | w and useful in ptical modu | | s in | | |
| — | cation for a United States F er 10 / 037,146 | atent was filed | i on <u>12/21/2</u> | 2001 | · | |
| for which an applic | cation for a United States P | atent was exe | cuted on | | , and | |
| Whereas, Xpone to "assignee" whose ma | nt Photonics Inc of ailing address is 425 | M East Huntington | onrovia, CA n Drive, Monr | ovia, CA 91016 | nerein referred | |
| desirous of acquiring the | ne entire right, title and inte | rest in the sam | ie; | | | |
| Now, therefore, in consideration of the sum oftendollars (\$_10), the receipt whereof is acknowledged, and other good and valuable consideration, I/We, the applicant(s), by these presents do sell, assign and transfer unto said assignee the full and exclusive right to the said invention in the United States and the entire right, title and interest in and to any and all Patents which may be granted therefor in the United States, I/We hereby authorize and request the Commissioner of Patent and Trademarks to issue said United States Patent to said assignee, of the entire right, title, and interest in and to the same, for his sole use and behoof; and for the use and behoof of his legal representatives, to the full end of the term for which said Patent may be granted, as fully and entirely as the same would have been held by me had this assignment and sale not been made. | | | | | | |
| Executed this 1974 day of MALCH , 2003 at MONROUR, CALFOLNIA. | | | | | | |
| | | | | | | |
| State of CALIFORNI | | | | (Signature) | | |
| County of Los Angles SS: | | | | | | |
| Before me personally appeared said <u>OSKAR PAINTER</u> | | | | | | |
| day of MALCH Seal | foregoing instrument be be, 2003 | NOTA | AMELA" STO OMM. # 1216 ARY PUBLIC-CALI Los Angeles Cour | 780 TO POLIFORNIA | ud-Stock | |
| Note: Signatures of all the inve | ntors or assignees of record of the | WY. | ា លេខ១ ស្វារ | Lo, Cook S | | |
| forms if more than one signature * Total of 5 | forms are submitted. | | | | | |

| ASSIGNMENT OF APPLICATION | Docket Number (Optional) CQC13NP | | | | |
|--|----------------------------------|--|--|--|--|
| Whereas, I/We, Kerry J. Vahala of San Gat referred to as applicant, have invented certain new and useful improvements Resonant optical modulators | s in | | | | |
| for which an application for a United States Patent was filed on 12/21/2 Application Number 10 / 037,146 | 2001 | | | | |
| for which an application for a United States Patent was executed on | , and | | | | |
| Whereas, Xponent Photonics Inc of Monrovia, CA to assignee whose mailing address is 425 East Huntington Drive, Monrovia, CA | herein referred | | | | |
| desirous of acquiring the entire right, title and interest in the same; | | | | | |
| Now, therefore, in consideration of the sum oftendollars (\$_10), the receipt whereof is acknowledged, and other good and valuable consideration, I/We, the applicant(s), by these presents do sell, assign and transfer unto said assignee the full and exclusive right to the said invention in the United States and the entire right, title and interest in and to any and all Patents which may be granted therefor in the United States, I/We hereby authorize and request the Commissioner of Patent and Trademarks to issue said United States Patent to said assignee, of the entire right, title, and interest in and to the same, for his sole use and behoof; and for the use and behoof of his legal representatives, to the full end of the term for which said Patent may be granted, as fully and entirely as the same would have been held by me had this assignment and sale not been made. | | | | | |
| executed this distribution day of MARCH at MonRovia, CALIFORNIA | , 20 <u><i>03</i></u> | | | | |
| State of <u>LAUFORNIA</u>) County of <u>Los Angeles</u>) SS: | (Signature) | | | | |
| Before me personally appeared said KERRY VAhala | 1 | | | | |
| and acknowledged the foregoing instrument to be his free act and deep first pame and acknowledged the foregoing instrument to be his free act and deep first pame and acknowledged the foregoing instrument to be his free act and deep first pame and acknowledged the foregoing instrument to be his free act and deep first pame and acknowledged the foregoing instrument to be his free act and deep first pame and acknowledged the foregoing instrument to be his free act and deep first pame and acknowledged the foregoing instrument to be his free act and deep first pame and acknowledged the foregoing instrument to be his free act and deep first pame and acknowledged the foregoing instrument to be his free act and deep first pame and acknowledged the foregoing instrument to be his free act and deep first pame and acknowledged the foregoing instrument to be his free act and deep first pame and acknowledged the first pame and | (Notary Public) | | | | |
| Note: Signatures of all the inventors or assignees of record of the cuttor interest of the language forms if more than one signature is required, See below. * ** Total of 5 forms are submitted. | (National Submit multiple | | | | |

| ASSIGNMENT OF APPLICATION | | | | | Docket Number (CQC | Optional) 13NP | |
|---------------------------|--|--|---------------------------------|-----------------------------------|------------------------|-------------------|--|
| | | David W. Vernooy | | | adre, CA | | |
| | referred to as applican | nt, have invented certain n Resonant | ew and useful i optical modu | | s in | | |
| | | cation for a United States er10_/_037,146 | Patent was file | d on <u>12/21/</u> | 2001 | | |
| | for which an applic | cation for a United States | Patent was exe | ecuted on | | , and | |
| | Whereas, Xpone to assignee whose ma | nt Photonics Inc of ailing address is 42 | N 25 East Huntingto | fonrovia, CA on Drive, Mon | hovia, CA 91016 | erein referred | |
| | desirous of acquiring the | he entire right, title and int | terest in the sar | ne; | | | |
| | Now, therefore, in consideration of the sum of <u>ten</u> dollars (\$_10), the receipt whereof is acknowledged, and other good and valuable consideration, I/We, the applicant(s), by these presents do sell, assign and transfer unto said assignee the full and exclusive right to the said invention in the United States and the entire right, title and interest in and to any and all Patents which may be granted therefor in the United States, I/We hereby authorize and request the Commissioner of Patent and Trademarks to issue said United States Patent to said assignee, of the entire right, title, and interest in and to the same, for his sole use and behoof; and for the use and behoof of his legal representatives, to the full end of the term for which said Patent may be granted, as fully and entirely as the same would have been held by me had this assignment and sale not been made. | | | | | | |
| | Executed thisat | day ofday of | NAL | 7 /-/ | , 20 <u>/ 7</u> | · | |
| | State of AUFORA County of LOS ANGO Before me personally | SS: | AVID VE | _J Nooy | Of (Signature) | ly | |
| | and acknowledged the foregoing instrument to be his tag act and dead this took pameta STOCK and acknowledged the foregoing instrument to be his tag act and dead this took pameta STOCK and pameta stock | | | | | | |
| | Seal | | My | Los Angeles C Comm. Expires Ac | rii 23, 2003 T | ublic) | |
| f | Note: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, See below. | | | | | | |
| * | ☑ Total of 5 | forms are submitted. | | | | | |

| ASSIGI | Docket Numbe | er (Optional) (C13NP | | | | |
|--|---|-------------------------|---------------------------------|----------------|------------------------|--|
| Whereas, I/We, | Guido Hunziker | of | Altade | na, CA | ,hereafter | |
| referred to as applicant, | have invented certain ne Resonant o | | | s in | | |
| for which an applicate Application Number | ion for a United States P 10 / 037,146 | | | 2001 | | |
| for which an applicat | ion for a United States P | atent was ex | ecuted on | | , and | |
| Whereas, Xponent to assignee whose maili | Photonics Inc of of 425 | i East Hunting | Monrovia, CA ton Drive, Monr | ovia, CA 91016 | _herein referred is | |
| desirous of acquiring the | entire right, title and inter | rest in the sa | me; | | | |
| Now, therefore, in consideration of the sum of <u>ten</u> dollars (\$_10), the receipt whereof is acknowledged, and other good and valuable consideration, I/We, the applicant(s), by these presents do sell, assign and transfer unto said assignee the full and exclusive right to the said invention in the United States and the entire right, title and interest in and to any and all Patents which may be granted therefor in the United States, I/We hereby authorize and request the Commissioner of Patent and Trademarks to issue said United States Patent to said assignee, of the entire right, title, and interest in and to the same, for his sole use and behoof; and for the use and behoof of his legal representatives, to the full end of the term for which said Patent may be granted, as fully and entirely as the same would have been held by me had this assignment and sale not been made. | | | | | | |
| executed this 17 TH day of MARCH , 20 63 at MONROVIA, CALIFORNIA | | | | | | |
| State of <u>Alifornial</u> County of <u>Los Antill</u> Before me personally app | eared said <u>GUI</u> | DO H | C INZIKER | (Signature |) | |
| day of MARCH , 20 03 . PAMELA STOCK Comm. # 1216780 NOTARY PUBLIC-CRIMPORMIA Los Angeles Gracty (Notary Public) | | | | | | |
| Note: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, See below. | | | | | | |
| * ☑ Total of 5 | forms are submitted. | • | | | | |

| ASS | IGNMENT OF APP | LICATION | Do | ocket Number (Optional) CQC13NP |
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| 1 | nt, have invented certai | n new and useful | improvements in | , CA ,hereafter |
| | ication for a United Stat per10 / 037,146 | | | 1 |
| for which an appl | ication for a United Stat | es Patent was ex | ecuted on | , and |
| | ent Photonics Inc pailing address is the entire right, title and | | | herein referred a, CA 91016 is |
| acknowledged, and ot assign and transfer ur and the entire right, to United States, I/We he United States Patent to use and behoof; and fo | her good and valuable of the function of the f | consideration, I/W II and exclusive r to any and all P uest the Commiss entire right, title, of his legal repres | /e, the applicant(ight to the said i atents which ma sioner of Patent a and interest in a entatives, to the | (s), the receipt whereof is (s), by these presents do sell, invention in the United States ay be granted therefor in the and Trademarks to issue said and to the same, for his sole full end of the term for which a been held by me had this |
| Executed this /2 at MONROVIA | day o | MALCH | | , 20 <u><i>03</i></u> . |
| State of <u>LALIFOR</u> County of <u>LOS</u> And Before me personally | <u>c/25</u>) ss: | TLR SE | <u> 1</u> RCEL | (Signature) |
| and acknowledged the day of/// A. (! H) Seal Note: Signatures of all the inv forms if more than one signatures. | entors or assignees | PAME Comm NOTARY PL Los A | LA STOCK # 12167St. BLIC-CALIFORNIA Geles County There And 23 2003 | (Notary Public) (S) are required. Submit multiple |
| * Total of 5 | forms are submitted. | | · | |